ASSIGNMENT 9

Textbook Assignment: Organic Support Weapons: 60-mm mortar and AT4. Pages 14-1 through 14-33.

Learning Objective: Describe the main parts, functions, characteristics, and capabilities of a 60-mm mortar.

- 9-1. What are the characteristics of the 60-mm mortar?
 - Rifle-bore, breech-loaded, and high-angle-of-fire weapon
 - Rifle-bore, muzzle-loaded, and direct-fire weapon
 - Smooth-bore, muzzle-loaded, and direct-fire weapon
 - 4. Smooth-bore, muzzle-loaded, and high-angle-of-fire weapon
- 9-2. The 60-mm mortar has what maximum effective range, in meters?
 - 1. 2780
 - 2. 3490
 - 3. 4737
 - 4. 5126
- 9-3. A complete 60-mm mortar, in the conventional mode, weighs a total of how many pounds?
 - 1. 18.0
 - 2. 27.5
 - 3. 39.0
 - 4. 46.5
- 9-4. What cannon is used with a 60-mm mortar?
 - 1. M223A1
 - 2. M224
 - 3. M225
 - 4. M226E1
- 9-5. The bipod consists of what number of major assemblies?
 - 1. One
 - 2. Two
 - 3. Three
 - 4. Four

- 9-6. Before firing a 60-mm mortar, you should ensure the open end of the socket on the baseplate is pointing in what direction?
 - 1. Toward the gunner
 - 2. Away from the target
 - 3. Away from the assistant gunner
 - 4. Toward the target
- 9-7. With a 60-mm mortar in the conventional mode, you should use what baseplate?
 - 1. M8
 - 2. M7
 - 3. M6
 - 4. M5
 - 9-8. The 60-mm mortar uses which of the following standard sights when it is in the conventional mode?
 - 1. M29A2
 - 2. M34A1
 - 3. M53A2
 - 4. M64A1
 - 9-9. The sight unit is used for what primary purpose?
 - 1. To calibrate the weapon
 - 2. To lay-in the elevation and deflection
 - 3. To observe the target
 - 4. To estimate target distance
 - 9-10. When in the hand-held mode, a 60-mm mortar weighs a total of how many pounds?
 - 1. 15
 - 2. 18
 - 3. 22
 - 4. 26

- 9-11. To calibrate the sight unit for a 60-mm mortar correctly, the mortar crew most often uses what instrument?
 - 1. The M115 boresight
 - 2. The M321A calibrater
 - 3. The M64A1 aiming cycle
 - 4. The M2 compass
- 9-12. To see the aiming post at night, the gunner uses what instrument(s)?
 - 1. The M1 rheostat light
 - 2. The M53 and M54 instrument lights
 - 3. The M58 and M59 aiming posts

Learning Objective: Point out the types and uses of 60-mm mortar ammunition.

- 9-13. What type of 60-mm mortar ammunition is used to destroy or cause casualties to enemy personnel, emplacements, and vehicles?
 - 1. High explosive
 - 2. White phosphorus
 - 3. Illuminating
 - 4. Each of the above
- 9-14. Mortar rounds are all color coded. They are also stenciled with which of the following information?
 - 1. Model of round
 - 2. Caliber of round
 - 3. Ammunition lot number
 - 4. Each of the above
- What type of fuzes can be used 9-15. with 60-mm mortar ammunition?
 - 1. Time, superquick, and variable tires
 - 2. Impact, graduated time, and variable time
 - 3. Delay, quick, and impact
 - 4. Point detonating, time, and superquick

Learning Objective: Specify the duties and responsibilities of mortar squad members.

- 9-16. When a communicator is not attached, the mortar squad leader must carry what additional items of equipment?
 - 1. Baseplate stakes and compass
 - 2. Field radio only
 - 3. Field telephone and wire only
 - 4. Either a field radio or a field telephone and wire
- 4. The M23 hand-held flashlight 9-17. What member of the mortar squad establishes the baseplate position?
 - 1. Squad leader
 - 2. Gunner
 - 3. Assistant gunner
 - 4. Crew leader

Learning Objective: Describe procedures for positioning the mortar and preparing it for firing.

- 9-18. Which, if any, of the following methods is the most rapid for laying a mortar?
 - 1. Compass
 - 2. Aiming circle
 - 3. Sight to sight
 - 4. None of the above
- 9-19. After inserting the spherical projection of the cannon into the locking cap of the baseplate, you should rotate the cannon how much of a turn?
 - 1. One eighth
 - 2. One fourth
 - 3. One third
 - 4. One half

- 9-20. The bipod should be placed on what part of the barrel to attain an elevation of 1435 mils?
 - 1. Lower saddle
 - 2. Upper saddle
 - 3. Center saddle
 - 4. Half the distance between the white lines
- 9-21. To calibrate a 60-mm mortar, you should place the bipod on what part of the barrel?
 - 1. Lower saddle
 - 2. Upper saddle
 - 3. Center saddle
 - 4. Half the distance between the white lines
- 9-22. When the bipod is attached to the upper saddle, the feet of the bipod should be set at what approximate distance, in feet, from the baseplate?
 - 1. 1
 - 2. 2
 - 3. 1 1/2
 - 4. 2 1/2
- 9-23. When placing the aiming post, you should place the far post approximately how many meters from the mortar?
 - 1. 15 to 25
 - 2. 30 to 50
 - 3. 45 to 65
 - 4. 70 to 90
- 9-24. When placing the aiming posts, you should always place the near post first?
 - 1. True
 - 2. False
- 9-25. When you look through the sight and see the aiming posts, they appear as one. This is what type of sight picture?
 - 1. Parallel
 - 2. Centered
 - 3. Aligned
 - 4. Compensated

- 9-26. In firing the mortar, you should take mask clearance into consideration for which of the following reasons?
 - To prevent enemy countermortar fire
 - To keep the position of the mortar secret
 - 3. To prevent the enemy from falsifying their location
 - 4. To prevent premature detonation of fired rounds
- 9-27. Mask and overhead clearance must be determined and reported to which of the following locations?
 - 1. The fire direction center
 - 2. The battalion command post
 - 3. The headquarters company
 - 4. The ammunition supply point
- 9-28. To sight the mortar when the aiming post appears to be separated, you should take which of the following actions?
 - Align the mortar sight on the left edge of the far post
 - 2. Use the compensated sight picture
 - 3. Use the aligned sight picture
 - 4. Align the mortar sight on the right edge of the near post
- 9-29. What key word is used to apply firing data to the sight and the mortar?
 - 1. LARS
 - 2. DEAD
 - 3. RALS
 - 4. DEED

Learning Objective: For the 60-mm mortar, name the types of firing commands, the elements of each type, and the person or position responsible for giving them.

- originate?
 - 1. The fire direction center
 - 2. The squad leader
 - 3. The mortar platoon leader
 - 4. The fire support coordination center
- What are the two types of fire 9-31. commands?
 - 1. First and second
 - 2. First and subsequent
 - 3. Initial and subsequent
 - 4. Primary and alternate
- 9-32. There is a total of how many elements in the initial fire command?
 - 1. Five
 - 2. Six
 - 3. Seven
 - 4. Eight
- What portion of the initial fire 9-33. command should always be included in a subsequent fire command?
 - 1. Alert
 - 2. Method of fire
 - 3. Mortar to fire
 - 4. Elevation
- The number of increments left on a 9-34. round of ammunition is announced in what portion of the fire command?
 - 1. Alert
 - 2. Elevation
 - 3. Charge
 - 4. Method of fire

Learning Objective: Describe techniques of preparing ammunition for loading and firing in a 60-mm mortar.

- 9-30. Where do fire commands normally 9-35. What member of the mortar squad removes the mortar sight during the firing of the first three rounds or until the baseplate is firmly seated?
 - 1. Squad leader
 - 2. Gunner
 - 3. Assistant gunner
 - 4. Ammo bearer
 - When a 60-mm mortar, in the con-9-36. ventional mode, is used in the drop-fire method, the firing selector should be set to what position?
 - 1. T
 - 2. S
 - 3. F
 - 4. D
 - 9-37. When firing a 60-mm mortar, crew members should wear hearing protection whenever they are within what distance of the muzzle?
 - 1. 1 meter
 - 2. 2 meters
 - 3. 1 1/2 meters
 - 4. 2 1/2 meters
 - 9-38. When laying-in a 60-mm mortar, in the hand-held mode, you should use what device to estimate the target range before firing?
 - 1. The M64A1 sight unit
 - 2. The range indicator assembly
 - 3. The canter indicator assembly
 - 4. The M54A1 sight unit
 - What type of cartridge is designed 9-39. for use with a 60-mm mortar when it is in the hand-held mode?
 - 1. HE, M49A1
 - 2. HE, M720
 - 3. WP, M321A2
 - 4. WP, M322
 - What color on the indicator scale 9-40. is used for charge one?
 - 1. Red
 - 2. Yellow
 - 3. Black
 - 4. White

- 9-41. A mortar round misfire normally occurs when a round has which of the following problems?
 - It misses the impact area of the target
 - 2. It hangs in the barrel without striking in the firing pin only
 - It strikes the firing pin and fails to fire only
 - 4. It hangs in the barrel or strikes the firing pin and fails to fire
- 9-42. When a misfire is first detected, what person should sound the alarm?
 - 1. The gunner
 - 2. The assistant gunner
 - 3. The ammunition bearer
 - 4. The crew member who first notices it
- 9-43. For safety reasons, the mortar crew must wait what length of time before attempting to remove a mortar round?
 - 1. 1 minute
 - 2. 2 minutes
 - 3. 3 minutes
 - 4. 4 minutes
- 9-44. When clearing a misfire, the assistant gunner should stop the misfire round with which of the following objects?
 - 1. His thumbs
 - 2. A piece of wood
 - 3. His helmet
 - 4. A pair of asbestos gloves

Learning Objective: Describe the practices used in the care, cleaning, and lubrication of a 60-mm mortar.

- 9-45. The care and cleaning of a 60-mm mortar and its accessories are essential duties of what squad members?
 - 1. The ammunition carriers only
 - 2. The gunner and assistant gunner only
 - 3. The crew members of the mortar squad
 - 4. The unit armorers
 - 9-46. After the mortar has been fired, the barrel should be cleaned how many times?
 - 1. Five
 - 2. Two
 - 3. Three
 - 4. Four
 - 9-47. You should let the mortar barrel cool before using bore cleaner on it for which of the following reasons?
 - To prevent rust from forming on the barrel
 - 2. To prevent dark spots from forming on the barrel
 - 3. To prevent a cracked barrel
 - 4. To prevent a bulged barrel

Learning Objective: Define the functions and duties of the forward observer and the fire direction center.

- 9-48. What person is known as the "eyes" of the indirect-fire team?
 - 1. Gunner
 - 2. Squad leader
 - 3. Forward observer
 - 4. Advanced guard

- 9-49. When in communication with either 9-53. an infantry or artillery fire direction center, an individual can effectively place mortar fire on any target that cannot be seen visually in which of the following ways?
 - 1. By using the target-grid method
 - 2. By giving known bench marks
 - 3. By giving the size, in feet, of prominent terrain features
 - 4. By using the prominent height of nearby objects
- 9-50. The forward observer's azimuth to the target may have errors as great as how many mils without having an appreciable effect on adjustment?
 - 1. 100
 - 2. 110
 - 3. 115
 - 4. 120
- 9-51. As a Seabee forward observer (FO), you may be working with the Army, Navy or Air Force. To work effectively, you need what special knowledge, if any?
 - The terminology peculiar to each of the armed services
 - The international, interservice special FO terminology
 - 3. The indirect-fire weapons command terminology
 - 4. None
- 9-52. An FO may report the location of a target for the FDC by using which of the following methods?
 - 1. Grid coordinates
 - 2. Shifts from the reference point
 - 3. Polar coordinates
 - 4. Each of the above

- 9-53. The FDC of a Seabee battalion should be in which of the following locations during a defensive operation?
 - 1. The battalion command post
 - 2. The firing position, or close to it
 - 3. The battalion fire support center
 - 4. The headquarters company command post

Learning Objective: Describe the launcher and cartridge, 84-mm M136 (AT4) HEAT lightweight, antiarmor weapon system relative to purpose, use, operation, range, weight and components.

- 9-54. What are the primary duties of the FDC?
 - To receive and compute fire requests into fire commands
 - To keep a detailed record of all fire commands during a given operation
 - To maintain records concerning the amount of ammunition on hand
 - 4. Each of the above
- 9-55. The rocket for an AT4, 84-mm M134 Heat has which of the following components?
 - 1. Fin assembly
 - Point-initiating, piezoelectric fuze
 - 3. Precision-shaped explosive charge
 - 4. All of the above

- 9-56. What is the (a) length, (b) overall weight, and (c) the maximum range of the AT4?
 - 1. (a) 30 inches
 - (b) 13.4 pounds
 - (c) 2100 meters
 - 2. (a) 36 inches
 - (b) 18.2 pounds
 - (c) 1975 meters
 - 3. (a) 40 inches
 - (b) 14.8 pounds
 - (c) 2100 meters
 - 4. (a) 40 inches
 - (b) 14.3 pounds
 - (c) 2150 meters
- 9-57. What is the total weight of an AT4 cartridge?
 - 1. 9 pounds
 - 2. 7 pounds
 - 3. 5 pounds
 - 4. 4 pounds
- 9-58. The forward safety of an AT4 is located on what part of the firing mechanism?
 - Next to the transport safety pin
 - 2. Below the cocking lever
 - 3. To the right of the front sight
 - 4. On the forward end of the firing mechanism
- 9-59. You are preparing to fire the AT4. Which of the following steps is out of sequence?
 - 1. Place the launcher on your shoulder
 - 2. Release the sights
 - 3. Cock the launcher
 - 4. Remove the transport safety pin
- 9-60. For targets less than 200 meters, you must make an adjustment to the rear sight.
 - 1. True
 - 2. False

- 9-61. When the launcher is prepared but not fired, you can take it out of operation by which of the following steps?
 - 1. Release the forward safety
 - Return the cocking lever to the safe, uncocked position, and remove the launcher from your shoulder
 - Reinsert the transport safety pin all the way into the pinhole
 - 4. All of the above
- 9-62. When in combat. the AT4 fails to fire. You should take which of the following actions first?
 - 1. Release the forward safety
 - 2. Dispose of the faulty launcher
 - 3. Remove the launcher from your shoulder
 - 4. Wait 2 minutes and try again
- 9-63. What repairs, if any, are authorized at your level of maintenance?
 - 1. Sight replacement
 - 2. Minor dent repair
 - 3. Muzzle seal replacement
 - 4. None
- 9-64. In combat, after the AT4 is fired, it should be destroyed to prevent enemy use. The methods of destruction are burning, demolition, and what other actions?
 - 1. Submergence in water and removal of sights
 - 2. Gunfire and crushing
 - 3. Removal of sights and the safety pin
 - 4. Gunfire and removal of sights
- 9-65. When sighting an AT4, the gunner must first take which of the following steps?
 - 1. Place the 200-meter range on the target center of mass
 - 2. Apply the lead cross rule
 - 3. Estimate the distance to the target
 - 4. Estimate the speed of the target

- 9-66. The AT4 can be fired from either 9-68. the right or left shoulder.
 - 1. True
 - 2. False
- 9-67. Which of the following positions is most suitable for engaging moving targets?
 - 1. Standing only
 - 2. Kneeling only
 - 3. Both standing and kneeling
 - 4. Prone

- 1-68. To limit the possibility of malfunctions with the AT4, you should NOT use the weapon outside of what temperature range?
 - 1. -40°F to 140°F
 - 2. -50°F to 130°F
 - 3. -60°F to 120°F
 - 4. -70°F to 110°F

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